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ICSD 07.0052

March 12, 2007

FILED ELECTRONICALLY

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC

Dear Ms. Dortch:

Subject: Comments of the Ninth Notice of Proposed Rulemaking (NPRM) for PS Docket No. 06-229 and WT Docket No. 96-86, "In the Matter of Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010"

The State of Hawaii Department of Accounting and General Services (DAGS), in response to the Commission's 9th NPRM noted above, files these comments regarding modifications to the rules to accommodate the deployment of advanced broadband applications, related radio technologies, and a modern, IP-based system architecture in the 700 MHz public safety band:

1. The Commission must ensure that any changes to the rules do not negatively impact the use or future of the allocations in the 700 MHz band for public safety narrowband operation.

2. The DAGS urges the Commission to consider proposals to ensure that emergency first responders have access to reliable and interoperable communications through the use of broadband technologies in the 700 MHz public safety spectrum provided that:

- There are no changes to the technical parameters, other than changes in frequency or band layout, regarding the use of or protections provided to the narrowband spectrum allocated for public safety use in the 700 MHz band; and
- If the 700 MHz band is reconfigured the amount of narrowband spectrum (number of 6.25 kHz channels) allocated for General use and State use remains the same; and
- Interference to the narrowband channels from any broadband implementation or commercial use of adjacent or nearby spectrum is prevented; and

- Secondary operation of any broadband services within the narrowband spectrum in the 700 MHz band is prohibited; and
- If the 700 MHz public safety allocations are reconfigured the reconfiguration rules are placed into effect as rapidly as possible.

State of Hawaii agencies are continuing to deploy systems in the narrowband channels of the 700 MHz public safety band as authorized by FCC license WPTZ784. The DAGS continues to assert that the overall benefit derived from band reconfiguration outweighs the cost that will be incurred by the State of Hawaii to retune these systems *at this time*. However, further delay in band reconfiguration will increase this cost until at some point the DAGS may be forced to withdraw its support of 700 MHz public safety band reconfiguration. The Commission's rules relating to narrowband operations must stop changing to enable the deployment of narrowband systems in the 700 MHz band to flourish.

3. The DAGS strongly objects to the proposed use of the narrowband spectrum for secondary broadband operations. Our primary concern is for how we will meet the demands for public safety communications at the local level through the next five to ten years. We plan to satisfy these demands with "push-to-talk" radios operating on discrete channels or groups of channels in conventional and trunked modes. Secondary broadband operations in the narrowband segments threaten this channelized operation. As stated above, many of the State of Hawaii's agencies have deployed and are building systems in the 700 MHz narrowband allocations. Perpetuating the uncertainty regarding the viability of these channels by shifting rules and protection of their use complicates efficient use of this spectrum. The NPRM states that advanced technologies "may" be able to use the "white space" in the narrowband segments, that they "could" do this without interference to narrowband use, or that these technologies "could" be available in time for national broadband build-out. These assumptions, with their reliance on unproven technologies put established, well understood, standards based operations at risk. DAGS believes that this "demonstration" should not take place in the public safety band space.

4. The inclusion of secondary operation of this proposed broadband system in the narrowband segment of the 700 MHz public safety spectrum seems to suggest that the 12 MHz allocation proposed is insufficient to the task of serving the public safety needs of our communities while simultaneously establishing a viable commercial market to assist in its funding. DAGS believes that the Commission should look elsewhere for enough capacity for this proposal, or even consider partnering with federal agencies and using part of the NTIA managed spectrum. Placing this proposed broadband operation in the middle of the public safety band may potentially expose public safety operations in the narrowband segments at the top and bottom of the band to the same incompatible adjacent use that many are currently struggling to fix with the NPSPAC 800 MHz rebanding process. This also indicates a need to find another source of the proposed spectrum for this broadband experiment.

5. The DAGS urges the Commission to adopt a flexible band plan for the non-narrowband portions of the 700 MHz band that allows wideband use as well as broadband use. The DAGS

recommends that a portion of the non-narrowband segments of the band be allocated for wideband use with the technical parameters currently in force. Furthermore, regions should have the option to deploy wideband systems in the spectrum space until the broadband system becomes available. The proposal to fund part of the proposed system by reselling "excess" capacity seems unrealistic in that the areas with the most demand for this bandwidth in the commercial sector (major metropolitan areas) are those same areas with the most demand by public safety providers. One recent broadband proposal determined that 99.3 % of the U.S. population would be covered by a nationwide system that only encompassed 63.5% of the U.S. land area. Assuming the single broadband provider envisioned by this NPRM focuses on this same 99.3% of the population, many of our rural and remote areas (for Hawaii, virtually all islands but Oahu) will be without service. A scalable architecture that would permit deployment of wideband services (50 kHz to 150 kHz bandwidths) within the broadband allocations in areas where broadband deployment is absent must be allowed.

6. The DAGS urges the Commission to revisit the Petition for Reconsideration by the National Public Safety Telecommunications Council (NPSTC) made on March 7, 2001 regarding base/mobile pairing in the 700 MHz commercial allocations. The Commission should prohibit high power operation in the A, B, C, and D blocks between 776 and 794 MHz. The First Report and Order on this topic did establish standard pairing orientation for the commercial spectrum in this band as it does for the public safety spectrum. High powered transmissions were limited to the lower portion on the commercial allocation (746-764 MHz) and the upper portion was restricted to low power operations. The DAGS agrees with the NPSTC and "... urges the FCC to reconsider its decision to allow high power, commercial base station operations in the 777-792 MHz band and instead revert to the original 700 MHz original band plan adopted in the First Report and Order of this proceeding."

7. One popular response to the subject NPRM is the Broadband Optimization Plan (BOP) originally proposed by Access Spectrum and Pegasus Communications. We do not believe that the BOP serves the best interests of the public safety community in Hawaii. The BOP reduces the amount of both commercial and public safety spectrum used for guard bands and adds 3 MHz of spectrum to the public safety allocation. We note Verizon's concern: "The interference potential at 700 MHz is the same type of interference present at 800 MHz, which required a hugely expensive rebanding effort with Nextel. Removing the Guard Band restrictions would create the same problems at 700 MHz." We believe that additional independent review is needed to determine if strongly enforced commercial guard bands remain necessary in band to separate incompatible services and whether the reconfiguration suggested by the BOP would risk increased interference. We also fear that the BOP suggestion to place a guard band between the 700 MHz and NPSPAC 800 MHz public safety bands may be the beginning of a process that will compromise and/or eventually decrease the 700 MHz narrowband channel allocations.

8. The DAGS would like to put forward a suggestion for an alternate reconfiguration that will allow for broadband deployment in the 700 MHz public safety segment while mitigating many of

the deficiencies we have noted thus far. The Hawaii Alternative (See Appendix A for band plan drawing) recommends that the Commission:

- Move the broadband segment to the lower edge of the public safety bands:
    - Relocate narrowband channels 1-480 from the 764 MHz -767 MHz band segment to the 770 MHz - 773 MHz band segment.
    - Relocate narrowband channels 961-1440 from the 794 MHz - 797 MHz band segment to the 800 MHz - 803 MHz band segment.
    - Relocate wideband channels 1-120 (767 MHz - 773 MHz) to:
        - A 5 MHz wide Broadband allocation from 764 MHz to 769 MHz.
        - A guard band/wideband allocation from 769 MHz to 770 MHz.
    - Relocate wideband channels 121-240 (797 MHz - 803 MHz) to:
        - A 5 MHz wide Broadband allocation from 794 MHz to 799 MHz.
        - A guard band/wideband allocation from 799 MHz to 800 MHz.

    Note: Establishing a proper guard band and Broadband out of band emission limits is essential to protect narrowband operations.

- Assign two 5 MHz wide segments to Broadband within the public safety allocations.

- Insert 1 MHz wide "internal guard bands" between Broadband and narrowband segments within the public safety allocations.
    - Permit wideband operation on 50 kHz channels within the internal guard bands as long as it is compatible with and protects narrowband operations (See Appendix B).
        - Allocate the two 50 kHz wide channel pairs near the center and top of this segment to nationwide interoperability (with no aggregation).
            - 769.45 MHz to 769.50 MHz (paired with 799.45 MHz to 799.50 MHz) and 769.95 MHz to 770 MHz (paired with 799.95 MHz to 800 MHz)
        - Allocate the three 50 kHz wide channel pairs to State use and permit aggregation up to 150 kHz.
            - 769.65 MHz to 769.80 MHz (paired with 799.65 MHz to 799.80 MHz)
        - Place all of the remaining fifteen 50 kHz wide channel pairs under Regional Planning Committee control and permit aggregation up to 150 kHz.
    - Develop rules regarding wideband operations that:
        - Minimize or prohibit interference from broadband interference to wideband operations in the 769.45 MHz to 770 MHz and 799.45 MHz to 800 MHz ranges.

    - Require wideband operations in the 769 MHz to 769.45 MHz and 799 MHz to 799.45 MHz ranges to accept interference from broadband operations.

- Prohibit high power repeater operation in the commercial allocations for the A, B, C, and D Blocks in the range between 776 MHz and 794 MHz.

A comparison of the Hawaii Alternative and the existing band plan is presented in Appendix C. Appendix D is Appendix A redrawn to indicate that the now-adjacent narrowband segments are contiguous.

9. DAGS requests that the Commission present a detailed estimate of how much will be saved by the proposed nationwide broadband service versus the total cost of ownership of existing technology systems. Many public safety entities have had a painful experience with the uncovered administrative costs to respond and participate in the NPSPAC 800 MHz rebanding. The Commission should provide a comparison of the one-time start up and lifecycle costs of an agency owned system vs. estimated recurring costs of a single provider fee-for-service based broadband system.

10. The DAGS believes this proposal once again demonstrates the need for strong regional planning committees (RPCs) and provides an opportunity for the Commission to demonstrate its unwavering support of the RPC process. The RPC process established by the Commission is the best mechanism available for administering broadband and wideband spectrum use by first responders within their own region. RPCs should be given the flexibility necessary to meet the requirements in their regions without being forced to wait for a single, national public safety broadband licensee that may or may not address the needs of agencies within the majority of the RPCs' regions. We are concerned that the push for broadband capability may be driven more by a desire to take advantage of the huge potential income from commercial interests in a public-private partnership rather than providing the best service possible to the public safety sector. The FCC should advocate a nationwide public safety network that provides cross discipline and inter agency communications where necessary. If a single national licensee best serves such a network, the FCC should charge that entity with determining the best technology and method of deployment. Public safety alone must determine the nationwide requirements for voice and data communications. This is best done through a strong partnership with the RPCs.

10. Finally, the DAGS would like to bring to the Commission its concern with a matter related to channelized public safety operations that is not within the scope of this proceeding. As part of the NPSPSC rebanding, public safety will eventually have access to spectrum in the 809.00 MHz to 809.75 MHz range paired with spectrum in the 854.00 MHz to 854.75 MHz range. Under current rules there is no RPC oversight of these allocations. The DAGS urges the Commission to develop rules to extend the RPC process to this spectrum during the period that these allocations are available exclusively to public safety.

In conclusion the DAGS believes that the Commission must ensure that any changes to the rules do not negatively impact the use or future of the allocations in the 700 MHz band for public safety narrowband operation, the Commission must prohibit any secondary Broadband operation within the 700 MHz narrowband segment, changes to the FCC band plans must not jeopardize operations in either the narrowband segments of the 700 MHz band or the NPSPAC 800 MHz band, and rules have to stop changing for 700 MHz narrowband to prosper.

The DAGS owns and operates the Hawaii State Government telecommunications systems and supporting infrastructure. The DAGS Information and Communications Services Division is the licensee of record for nearly all State of Hawaii government radio systems.

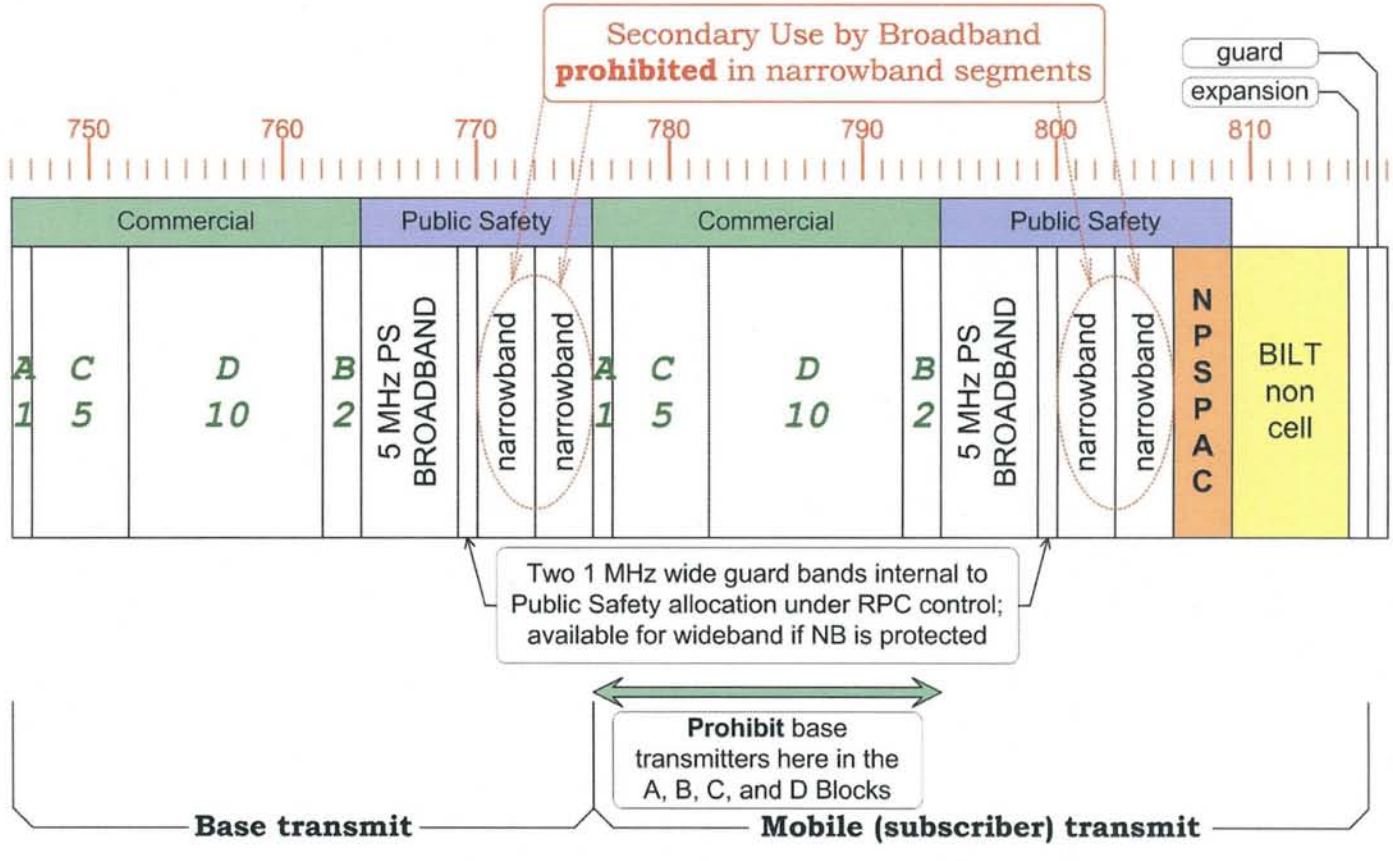
Thank you for the opportunity to comment on this matter.

Respectfully submitted,

RUSS K. SAITO
Comptroller

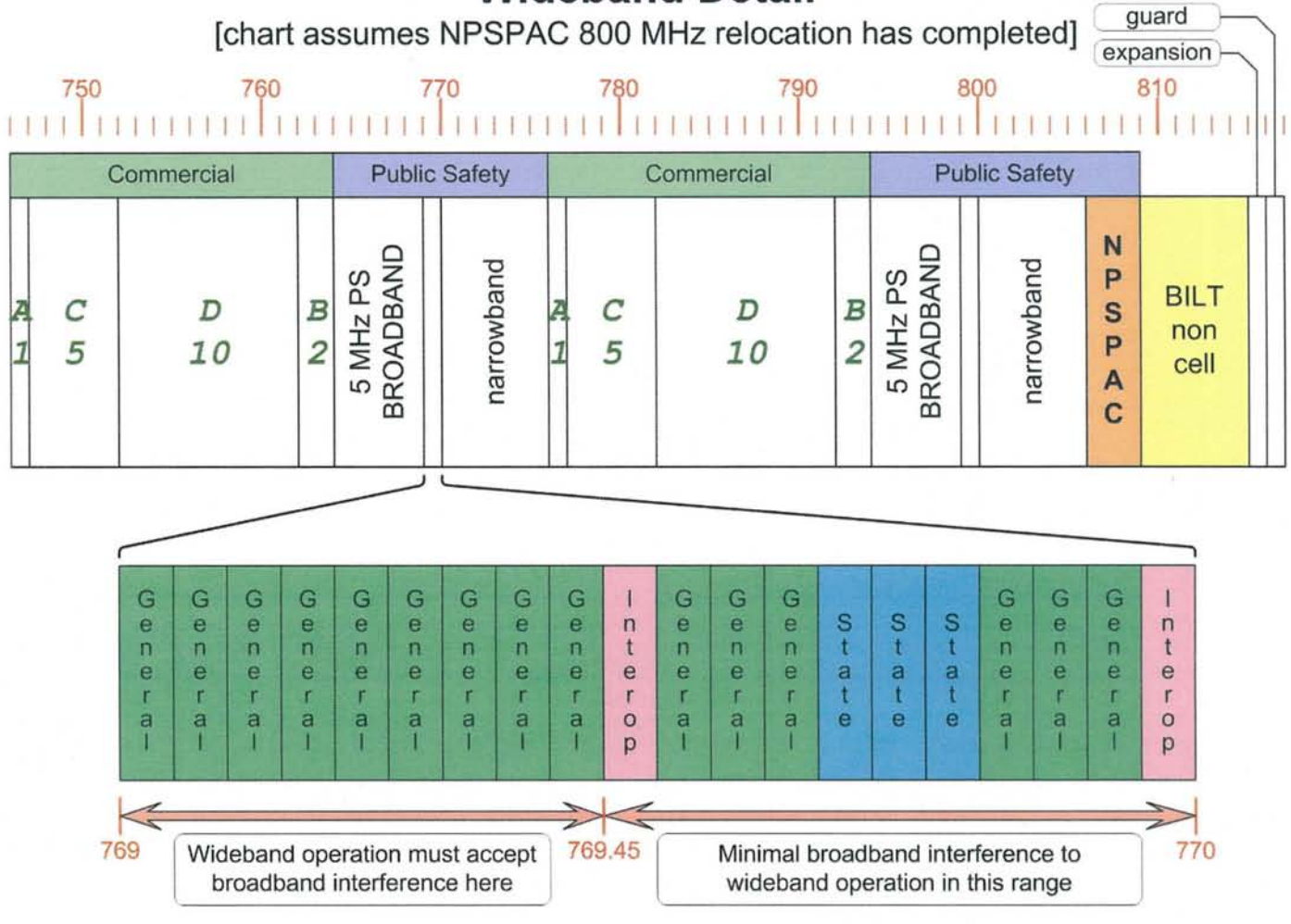
Appendix A: Hawaii Alternative for 700 MHz Public Safety Band to Accommodate Broadband

[chart assumes NPSPAC 800 MHz relocation has completed]



Appendix B: Hawaii Alternative Wideband Detail

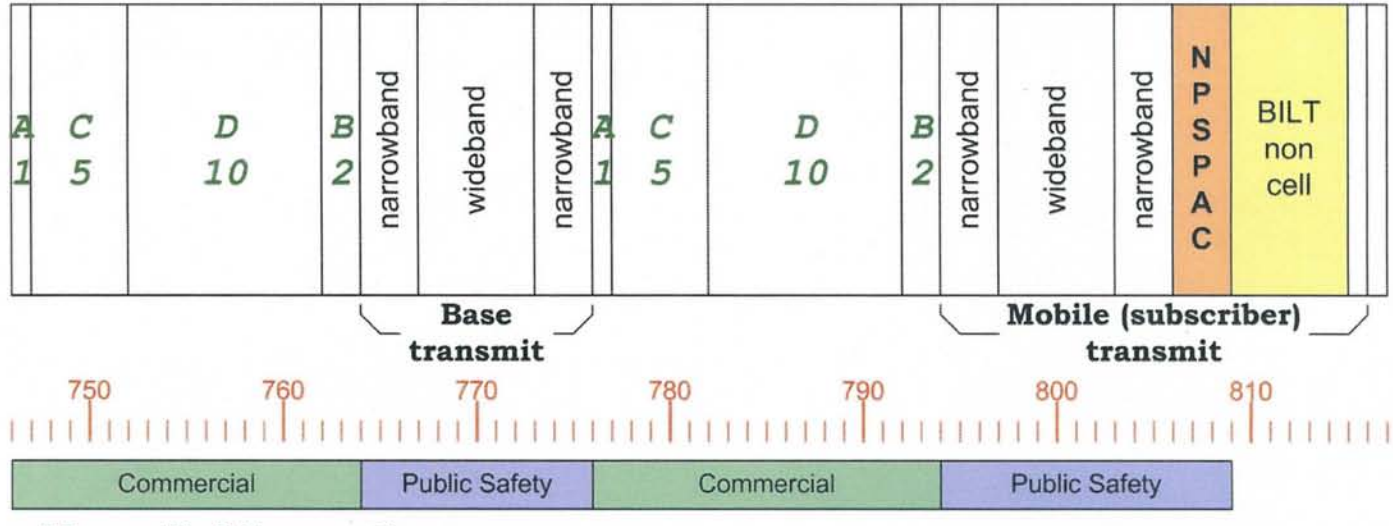
[chart assumes NPSPAC 800 MHz relocation has completed]



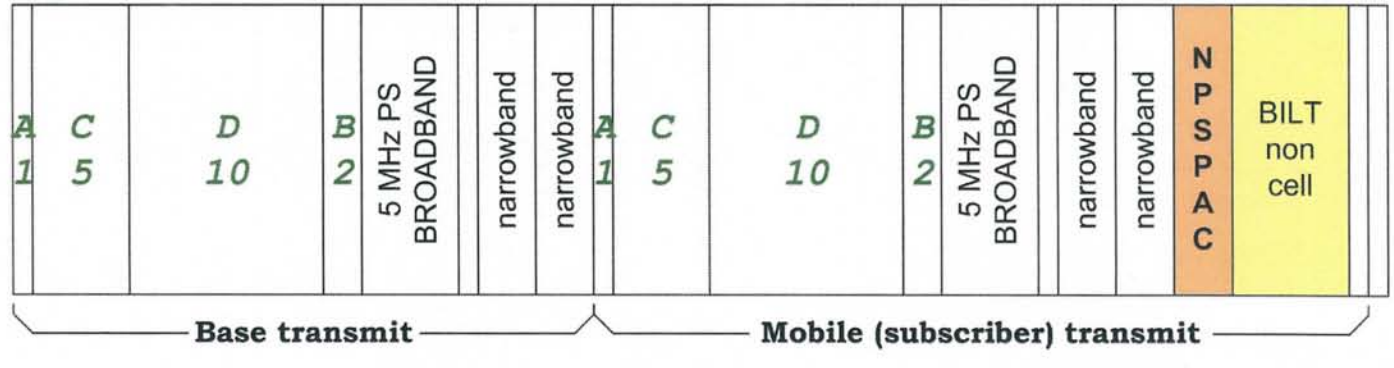
Appendix C: Existing Bandplan vs Hawaii Alternative

[chart assumes NPSPAC 800 MHz relocation has completed]

Existing Bandplan



Hawaii Alternative



Appendix D: Hawaii Alternative for 700 MHz Public Safety Band to Accommodate Broadband

[chart assumes NPSPAC 800 MHz relocation has completed]